

We claim:

1. Method for high definition printing on an article comprising the steps of:

providing a digital image file;

5 four color process printing an image from the digital image file onto a water soluble polymer film with solvent based ink to form a printed water soluble film;

placing the printed water soluble polymer film on water to at least partially dissolve the water soluble film;

10 liquefying the solvent based ink image floating on the water with a solvent activator; and

submerging the article in the water against the liquefied solvent based ink image to transfer the liquefied solvent based ink image to a surface of the article.

15 2. Method as in claim 1 wherein the image in the digital image file is suitable for printing a seamless repeating pattern.

3. Method as in claim 2 wherein the image in the digital image file is a camouflage pattern.

20 4. Method as in claim 1 wherein the step of providing a digital image file includes providing a digitized image or digital photograph depicting a plurality of digital image elements and arranging the plurality of digital image elements with a computer to form the image suitable for printing a seamless repeating pattern.

25 5. Method as in claim 4 wherein the image in the digital image file is a camouflage pattern.

30 6. Method as in claim 5 wherein the digitized image or digital photograph depicts vegetation and the digital image elements are components of vegetation.

35 7. Method as in claim 1 wherein the step of four color process printing comprises rotogravure printing.

8. Method as in claim 1 wherein the printed water soluble polymer film is placed on water such that the water soluble film contacts the water and the solvent based ink image faces away from the water.

5 9. Method as in claim 1 further comprising priming the article by applying a layer of primer paint to the article.

10 10. Method as in claim 1 further comprising rinsing the article after transferring the liquefied solvent based ink image to a surface of the article to remove residual water soluble polymer film.

15 11. Method as in claim 1 further comprising the step of applying a finish coating to the article after transferring the liquefied solvent based ink image to a surface of the article.

12. Method as in claim 1 wherein the four color process printing is performed with registration of not greater than 0.006 inch.

20 13. Method as in claim 1 wherein the water soluble polymer film is a poly vinyl alcohol film.

14. Article decorated with a high definition image made according to a method comprising the steps of:

25 providing a digital image file;
four color process printing an image from the digital image file onto a water soluble polymer film with solvent based ink to form a printed water soluble film;

placing the printed water soluble polymer film on water to at least partially dissolve the water soluble film;

30 liquefying the solvent based ink image floating on the water with a solvent activator; and

submerging an article in the water against the liquefied solvent based ink image to transfer the liquefied solvent based ink image to a surface of the article.

15. Article as in claim 14 wherein the image in the digital image file is suitable for printing a seamless repeating pattern.

5 16. Article as in claim 15 wherein the image in the digital image file is a camouflage pattern.

10 17. Article as in claim 14 wherein the step of providing a digital image file includes providing a digitized image or digital photograph depicting a plurality of digital image elements and arranging the plurality of digital image elements with a computer to form the image suitable for printing a seamless repeating pattern.

18. Article as in claim 17 wherein the image in the digital image file is a camouflage pattern.

15 19. Article as in claim 18 wherein the digitized image or digital photograph depicts vegetation and the digital image elements are components of vegetation.

20 20. Article as in claim 1 wherein the step of four color process printing comprises rotogravure printing.

25 21. Article as in claim 1 wherein the printed water soluble polymer film is placed on water such that the water soluble film contacts the water and the solvent based ink image faces away from the water.

22. Article as in claim 1 further comprising priming the article by applying a layer of primer paint to the article.

30 23. Article as in claim 1 further comprising rinsing the article after transferring the liquefied solvent based ink image to a surface of the article to remove residual water soluble polymer film.

35 24. Article as in claim 1 further comprising the step of applying a finish coating to the article after transferring the liquefied solvent based ink image to a surface of the article.

25. Article as in claim 1 wherein the four color process printing is performed with registration of not greater than 0.006 inch.

5 26. Article as in claim 1 wherein the water soluble polymer film is a poly vinyl alcohol film.

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